



HEALTHY, WELL MANAGED GRASSLANDS = HEATHIER SOILS = BETTER RAINFALL INFILTRATION & RETENTION = HIGHER PRODUCTION

Grassland Managers,

It is doubtful that anyone would argue the importance of rainfall and water to every South Dakotan. Across the state discussions are being held on what we can do to make our fields, pastures, and soil ready to receive precipitation. How we manage our lands determines how well that land is able to absorb and hold onto that water.

We are learning so much as new information and research is gathered daily. Some knowledge has been around for a while as the historical photo shows. What does better rainfall infiltration mean on a landscape scale? -It means increased production on our grasslands.

Most years, NRCS helps South Dakota ranchers apply over 80,000 acres of improved grazing management through the facilitating practices of the Environmental Quality Incentives Program (EQIP). It is very reasonable to assume that land is able to infiltrate 1 additional inch of rainfall with that improved management and the improved soil health that results.

That extra inch amount of water, over 80,000 acres, would fill 264,000 tanker trucks. They would stretch 3,500 miles. It is only 2,800 miles from Los Angeles to New York City.

What does it mean for production? Normally, grasslands can produce 150 to 200 pounds of forage with every additional inch of soil moisture. Over 80,000 acres that is 12 million pounds of forage. Let assume we only harvest 25% of that with grazing livestock....that is an additional 3,300 Animal Unit Months (AUMs) of production.

Here is a guick calculation for a 10,000 acre ranch.

10,000 acres x 150 lbs. forage produced per acre = 1,500,000 lbs. of forage

If the rancher utilizes 25%...

1,500,000 lbs. x .25% = 375,000 lbs.

375,000 lbs. divided by 900 lbs. per Animal Unit Month (AUM) = 416.67 AUMs

So, if we could get more water to infiltrate the soil on that 10,000 acre ranch, that value would be additional forage for over 400 additional AUMs.

Ranchers who develop and implement comprehensive grazing management systems increase the health of their soil. That healthier soil will better handle rain, or lack of rain, throughout the year. We have come a long way in understanding and managing our natural resources. At the start of 2017, many of us are evaluating where we've been, celebrating accomplishments, and looking ahead. As a land manager, you develop goals for your operation that include economics, environment and community. The partners involved with this grassland planner want to help you achieve those goals.

Thank you for your part in keeping healthy the environment we all share. Enjoy the Grassland Conservation Planner.

Jeff Zimprich, State Conservationist USDA Natural Resources Conservation Service South Dakota

Board of Directors and Members of the South Dakota Grassland Coalition











Jeffrey Zimprich, State Conservationist USDA Natural Resources Conservation Service South Dakota



| S M T W T E | S C M S

#### JANUARY 2017

S M T W T F S 29 30 31 1 2 3 4 4 5 16 17 18 19 20 21 22 23 24 25 6 7 29 10 21 22 23 24 25 6 73 29 10 1 2 3 4 4 5 16 17 18 19 20 21 22 23 24 25 6 73 29 1 2 3 4 2 5

25 26 27 28 29 30 31						<b>26 27 28</b> 1 2 3 4
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
New Year's Day			the firs	RCS for help in developing your conservatists for help in developing your conservatists for help in developing your conservations.		
8	9	10	11	12	13	14
		If your operation needs improv Quality Incentives Program (EQIP	rements on your gazing lands, consider P) or the Conservation Stewardship Prog			
15	16	17	18	19	20	21
	Martin Luther King Jr.'s Birthday					
22	23	24	25	26	27	28
29	30	31	1	2	3	4
					U Extension, NRCS and other	
					U Extension, NRCS and other cshops throughout the year.	



	JANUARY								
S	М	T	W	T	F				
1	2	3	4	5	6				
8	9	10	11	12	13				
15	16	17	18	19	20				
22	23	24	25	26	27				
29	30	31	1	2	3				

### FEBRUARY 2017

MARCH									
<b>S</b> 26	M 27			7		S 4			
5				9		11			
12	13	14	15	16	17	18			
19	20	21	22	23	24	25			
26	27	28	29	30	31	1			

<b>29 30 31</b> 1 2 3 4						26 27 28 29 30 31 1
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
Conservation easements can keep Contact N	o working lands in production while prot IRCS or USFWS for options and payment	recting the grassland resource.		Groundhog Day		
5	6	7	8	9	10	11
12	13	14	15	16	17	18
Lincoln's Birthday		Valentine's Day	Great Horned Owls begin nesting.			
19	20	21	22	23	24	25
	President's Day		Washington's Birthday			
26		28	1	2	3	4
		W 116				
		Mardi Gras				



#### **MARCH 2017**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	1	2	3	4
5	6	<b>7</b> Male sage grouse begin	8  Based on rainfall amounts	<b>9</b> received last fall and precipitation forec	10 ast for this spring, determine if grass	11
		attending leks to perform courtship strutting displays.	production will be close to	normal or reduced this spring. Develop a plan as needed. Find the NRCS SD Drougl	and/or revise action items within your	
12	13	14	15	16	17	18
Daylight Savings Begins @ 2am			Meadowlarks migrate through the state Im height grassland habitat begins in r			
19	20	21	22	23	24	25
	First Day of Spring					
26	27	28	29	30	31	1
schedule. Add a sr	l pollinator plot planning and site prepa maller butterfly or native pollinator ga including milkweeds to attract monar	rden near your		Chorus frogs emerge and beg	in calling from small wetlands.	



	MARCH									
S	М	T	W	T	F	1				
26	27	28	1	2	3					
5	6	7	8	9	10	i				
12	13	14	15	16	17	1				
19	20	21	22	23	24	2				
26	27	28	29	30	31					

### **APRIL 2017**

S M T W T F S 6 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 1 2 3 3

26 27 28 29 30 31 1						28 29 30 31 1 2 3
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
26	27	28	29	30	31	1
						April Fool's Day
2	3	4	5	6	7	8
	Watch for migrating Sandhill and Whooping cranes. Report Whooping Crane sightings to SD Game, Fish and Parks or the U.S. Fish and Wildlife Service.			Finalize grazing plans (	for this growing season.	
9	10	11	12	13	14	15
9	10	"	12	15	17	15
		Assess growth of introduced cool-s grains or silage forages if spring pas	eason pasture. Continue to use hay, ture growth is less than 3-leaf stage.	Look for flowering pasque	flower in native rangelands.  Good Friday	
16	17	18	19	20	21	22
		Mallard and pintail	Mallard and pintail ducks begin nesting.			
Easter Day	Tax Day	Do you have a	drought plan?	Average nest initiation for	prairie grouse in central SD.	
23	24	25	26	27	28	29
	   species (e.g., bluegrass) in order to ma			Warblers migra	 ite through the state, passing through o	r staying to rest.
	spring weed control. Spot spraying may	be necessary.	Administrative Professionals Day	The Yellow W	arbler is a common nesting warbler nea	
30	1	2	3	4	5	6
Grass is greening up, do you need to adjust your mineral program?						



APRIL									
S	М	T	W	T	F				
26	27	28	29	30	31				
2	3	4	5	6	7				
9	10	11	12	13	14				
16	17	18	19	20	21				
23	24	25	26	27	28				
30	1	2	3	4	5				

### MAY 2017

			JUNE			
<b>S</b> 28		T	W 31	T		
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1

25 26 27 28 29 30 1						<b>30</b> 1 2 3 4 5 6
Saturday	Friday	Thursday	Wednesday	Tuesday	Monday	Sunday
6	5	4	3	2	1	30
	Start of primary nesting season as referenced in many Farm Bill programs. Cinco De Mayo	Use your infiltration kit to test your soil. National Day of Prayer	ges/seed set for better tate for plant recovery.		May Day	
13	12	11	10	9	8	Watch for details of the
International Migratory Bird Day		turn-out dates accordingly.	   of native grasses? Make adjustments to	Is there a delay in green-up		SD Grassland Coalition's Annual Bird Tour.
20	19	18	17	16	15	14
hile singing. The Bobolink is similar to	nest in grasslands. The black-and-whi ground. He then flutters to the ground w The male does low display flights, singin	n SD. flight 20-30 feet above	  ak nest initiation for pheasants in easter   Watch for grass tetany.	Pe	Watch for monarch butterflies.	Mother's Day
27	26	25	24	23	22	21
	better range utilization.	way from water resources to provide for	Place salt and mineral a			
3	2	1	31	30	29	28
					Peak of white-tailed deer fawn births in Eastern SD. Memorial Day	



			MAY			
	М					
30	1	2	3	4	5	
7	8	9	10	11	12	
14	15	16	17	18	19	
21	22	23	24	25	26	
28	29	30	31	1	2	

## **JUNE 2017**

<b>S</b> 25		T	JULY W 28	T		
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

28 29 30 31 1 2 3						<b>30 31</b> 1 2 3 4 5
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
28	29	30	31	1	2	3
	Remember to	enter information in your Record of Live	stock Grazing.	Peak of prairie grouse hatch.		
4	5	6	7	8	9	10
	Peak of mule deer fawn births in western SD.				mer annual forages.	
11	12	l3	ver, purple prairie clover, prairie sirioke,	15	begiii to seed suiii	17
	Check water sources frequently.		Flag Day		Peak of pheasant hatch.	
18	19	20	21	22	23	24
Father's Day			First Day of Summer	Watch grazing heights ar	 nd rest periods carefully1	
25		<b>27</b> imals based on plant height NOT calenda	28	29	30	1



### **JULY 2017**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	30	1
		<ul> <li>Graze annual forages at 18-24" heigi</li> <li>Watch pasture for weeds &amp; invasive</li> <li>Remember to enter information in year</li> </ul>	S.		Evaluate shade/water needs and pla     Slow rotation and lengthen recovery	
2	3	4	5	6	7	8
		Independence Day	If drought conditions occurre Action items for herd managem	i d in the spring and continue now, forago ent and adjustments to the grazing plar	e production will be reduced. n may need to be implemented.	
9	10	11	12	13	14	15
		or condition, i.e., sediment or algae can				
16	17	18	19	20	21	22
			Field check gro	 pwth before turning into warm-season o	grass pastures.	
23	24	25	26	27	28	29
	Thistles are best conf	rolled at boot stage.	Collect flower	 r seeds from annuals for next year's butl	 terfly garden.	
30	31	1	2	3	4	5



			JULY			
S	М	T	W	T	F	
25	26	27	28	29	30	
2	3	4	5	6	7	
9	10	11	12	13	14	
16	17	18	19	20	21	
23	24	25	26	27	28	
30	31	1	2	3	4	

## AUGUST 2017

| SEPTEMBER | SEPT

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	1	2	3	4	5
		Remember to en Record of Live	ter details in your stock Grazing.		
7	8	9	10	11	12
Contact the SD Grassland Coalition about the South Dakota Grazing School.					
14	15	16	17	18	19
Consider cover crops	s as alternative forage; plant into small <u>c</u>	grain stubble.	Continue to implement Drought Cont	ingency Plan action items as needed.	
21	22	23	24	25	26
		Plan winter feed supply.			
28	29	30	31	1	2
	Contact the SD Grassland Coalition about the South Dakota Grazing School.  14  Consider cover crops	7 8  Contact the SD Grassland Coalition about the South Dakota Grazing School.  14 15  Consider cover crops as alternative forage; plant into small of the state	Remember to en Record of Live  7 8 9  Contact the SD Grassland Coalition about the South Dakota Grazing School.  14 15 16  Consider cover crops as alternative forage; plant into small grain stubble.  21 22 23	Remember to enter details in your Record of Livestock Grazing.  7 8 9 10  Contact the SD Grassland Coalition about the South Dakota Grazing School.  14 15 16 17  Consider cover crops as alternative forage; plant into small grain stubble.  Continue to implement Drought Continue to Plan winter feed supply.	Remember to enter details in your Record of Livestock Grazing.  7 8 9 10 11  Contact the SD Grassland Coalition about the South Bakota Grazing School.  14 15 16 17 18  Consider cover crops as alternative forage; plant into small grain stubble.  Consider cover crops as alternative forage; plant into small grain stubble.  21 22 23 24 25

# **SEPTEMBER**

Plan and install watering sources to help with livestock distribution, water quality and water quantity, and livestock performance.





		Α	UGUS	T		
S	М	T	W	T	F	9
30	31	1	2	3	4	
6	7	8	9	10	11	1
13	14	15	16	17	18	1
20	21	22	23	24	25	2
27	20	20	70	71	1	

### SEPTEMBER 2017

27 28 29 30 31 1 2						29 30 31 1 2 3 4
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
27	28	29	30	31	1	2
					Remember to ent Record of Live	
3	4	5	6	7	8	9
	Labor Day	Continue to implement Drought Contingency Plan action items as needed.				
10	11	12	13	14	15	16
	Patriot Day			Target pastures dominated by cool- occurs in order to reduce p		
17	18	19	20	21	22	23
	Watch for migrating	Monarch butterflies.			First Day of Autumn	
24	25	26	27	28	29	30
	neotropical migrants that winter in	igrate through the state on their way south. Many are grants that winter in Central and South America, making migration stops critical to their survival.  Sandhill Cranes migrate through the state. Endangered Whooping Cranes may travel with them or in separate small family groups. Report Whooping Crane sightings to SD Game, Fish and Parks or the U.S. Fish and Wildlife Service.				

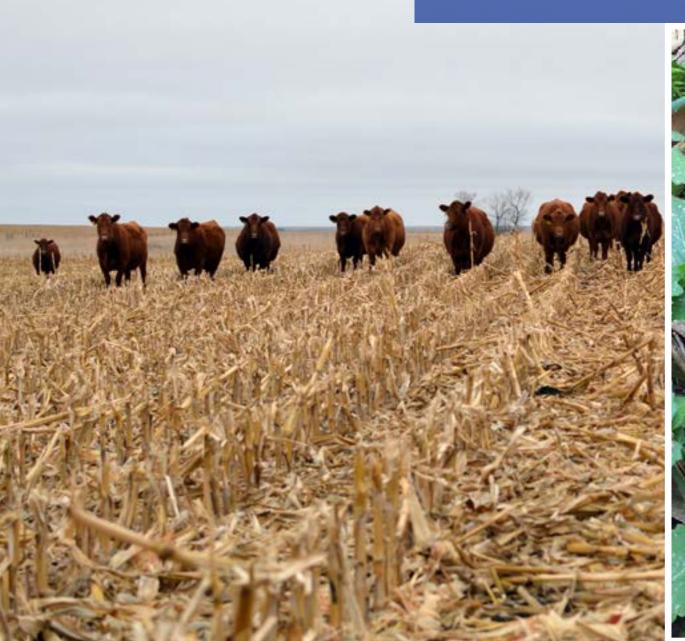


### OCTOBER 2017

24 25 26 21 28 29 30						26 27 28 29 30 1 2
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
		Conduct annua fertilized			Plan an outing with a child for	your management! pheasant, grouse, deer or duck o what conservation looks like.
8	9	10	11	12	13	14
	Columbus Day					
	Native American Day					
15	16	17	18	19	20	21
		Environmental Quality Incent	l improvements on your grazing lands, c ives Program (EQIP) or the Conservation nce is free and financial assistance sign-	n Stewardship Program (CSP).		
22	23	24	25	26	27	28
			ement Drought Contingency Plan action			
29	30	31	1	2	3	4
	Remember to enter details in your				Allow animals to graze alternati crops or cornstalks, to allow	
	Record of Livestock Grazing.	Halloween			Try strip grazing the sta	lks to reduce trampling.

## **NOVEMBER**

Crop aftermath provides an alternative forage source for livestock – manage grazing to retain adequate levels of residue. Residue protects soil from erosion and builds organic matter. Consider opportunities in your operations for cover crop mixes, such as aerial seeding in standing crops.





		0	CTOBE	R		
S	М	T	W	T	F	
1	2	3	4	5	6	
8	9	10	11	12	13	
15	16	17	18	19	20	
22	23	24	25	26	27	i
20	ZΠ	71	1	2	7	

### NOVEMBER 2017

		DE	CEMB	ER		
S			W			
26	27	28	29	30	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
71	1	2	7		-	-

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	1	2	3	4
				Prepare water	er systems and equipment for freezing t	emperatures!
5	6	7	8	9	10	11
Daylight Savings Time Ends		 Watch for Snowy Owls as they m	nove south into South Dakota during ye	ars when food may be scarce farther noi	th.	Veteran's Day
12	13	14  Evaluate end of v	/ear pasture use.	16	Prepare your financial statements for your lender and you!	18
19	20	21	22	Thanks giving Day	24	25
26	27	28	29	Thanksgiving Day 30	1	2
Start the tax planning process.			onvention and Trade show November 2 you have your 2017 pastures figured ou			



### DECEMBER 2017

						20 25 30 31 1 2 5
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2	6 27	28	29	30	1	2
Se	Test forages and hay before feeding; resu parate animals by nutritional needs; lactati	i Ilts can improve winter feeding efficienc ing or gestating stock need your best fol	ı y. rages.			
	3 4	5	6	7	8	9
			Check pastures and the SD Drought To	pol for 2018 forage production forecast.		
	0 11	12	13	Pearl Harbor Remembrance Day	15	16
'	0 11	12		14	13	10
	National Audubon Society's Christmas Bird Counts completed thro have been done since 1901, making this the longest-running citizen			Monitor body condition s	core trends of your herds.	
1	7 18	19	20	21	22	23
				First Day of Winter		
2	4 25	26	27	28	29	30
Christmas Eve	Christmas		Did you remember to take a vaca	ation this year? Plan for next year!		
:	1	2	3	4	5	6
New Year's Eve						

#### **GRASSLAND PLANNING**

Through this Grassland Planner, the U.S. Department of Agriculture NRCS is working with the South Dakota Grassland Coalition (SDGC) and other partners to improve the health of grassland resources. The NRCS, SDGC & SDSU Extension Service and other entities can assist you to determine and formulate resource protection and enhancement options that fit your operation. Depending upon the area of expertise and/or need for financial assistance, staff are available through NRCS and SD Conservation Districts, and other partners such as the SD Grassland Coalition & SDSU Extension specialists, the U.S. Fish and Wildlife Service, the South Dakota Departments of Agriculture and Game, Fish and Parks, and private organizations, such as Pheasants Forever, Ltd., who may have additional avenues of assistance.

Many resources are available to help you determine and formulate resource protection and enhancement options that fit your operation. Technical help is available for:

- Soil health
- Water quality and quantity
- Grazing systems
- Fencing
- Monitoring techniques
- · Drought management
- Grasses for forage production

Depending upon the area of expertise and/or need for financial assistance, staff are available through the following conservation partners.



USDA Natural Resources Conservation Service www.nrcs.usda.gov South Dakota State Office (605) 352-1200 South Dakota Grassland Coalition www.sdgrass.org **South Dakota Conservation Districts**www.sdconservation.org
(605) 895-4099

South Dakota State University (SDSU) Extension Service igrow.org (605) 394-2236

SD Department of Agriculture sdda.sd.gov (605) 773-3375

**South Dakota Game, Fish and Parks** gfp.sd.gov (605) 773-3658 U.S. Fish and Wildlife Service, Brookings www.fws.gov/ mountainprairie/pfw/sd (605) 697-2500 Pheasants Forever pheasantsforever.org (605) 651-2716

Ducks Unlimited www.ducks.org/ south-dakota (605) 881-3379 World Wildlife Fund (WWF) 13 S. Willson, Suite 1 Bozeman, MT 59715 (406) 582-0236 South Dakota Soil Health Coalition www.sdsoilhealth.org sdsoilhealth@gmail.com

Additional distribution of this planner courtesy of the Tri-State Livestock News.

#### **Photo Credits:**

**Cover:** Colette Kessler, USDA NRCS SD, Cronin Farms, Potter County

Inside Cover: T.H. Pozarnsky and Colette Kessler, USDA NRCS SD, Paulson Ranch, Beadle County

January: Colette Kessler, USDA NRCS SD, Adrian Ranch, Mellette, County

February Gary Hendrickson, USDA NRCS

**March:** Colette Kessler, USDA NRCS SD. Adrian Ranch, Mellette County

**April:** Cheryl Nielsen

May: Colette Kessler, USDA NRCS SD, Cronin Farms, Potter County

June: Colette Kessler, USDA NRCS SD, Cronin Farms, Potter County

July: Angela Roman, USDA NRCS South Dakota

August: Colette Kessler, USDA NRCS SD, Namken Ranch, Hamlin County

**September:** (Top) Jessica Michalski, Clark County

(Bottom) USDA NRCS SD, Loneman Project

October: Colette Kessler, USDA NRCS SD, Cronin Farms, Potter County
November: Lindley Howard. Bieber Red Angus Ranch. McPherson County

Isaac Wilde, Brookings County

**December:** Dan Udager, USDA NRCS SD, Cammack Brothers

Page 28: Colette Kessler, USDA NRCS SD, Kopriva Ranch, Clark County
Back Cover: Colette Kessler, USDA NRCS SD, Adrian Ranch, Mellette, County

#### **HOLISTIC MANAGEMENT**

#### SAVORY FRAMEWORK FOR HOLISTIC MANAGEMENT

WHOLE UNDER MANAGEMENT	DEC	DECISION MAKERS			OURCE BAS	E	MONEY		
Holistic Context	Statement of Purpose Quality of Life Forms of Production Future Resource Base								
Eco system Processes		nmunity namics	- Water Cycl	е	)—(	Mineral Cycle		Energy	Flow
Conventional Decision Making		Objectives	Goals		Vis	ion		Mission	
Tools	Human Creativity	Technology	Fire	Rest	Graz	ing	Animal Impact	Living Organisms	Money & Labor
One or More Factors	Past Experience	Expert Opinion	Research Results		Expediency	Compror	nise	Cultural Norms	Cost, Etc.
Testing Questions Objectives and Actions	Cause & Effect	Weak Link • Social • Biological • Financial	Marginal Reaction		Gross Profit Analysis	Energy/Mo Source Pat Of Use	tern	Sustainability	Gut Check
Management Guidelines	Learning & Practice	Organization & Leadership	Marketing	Time	Stock D & Herd		Cropping	Burning	Population management
Processes Unique to Holistic Management		Holistic Financial Planning		Holistic Planned Holistic Land Grazing Planning				Holistic Ecological Monitoring	
Feedback Loop	Replan	Replan (Assume Wrong with Environment & Financials)  Control						Monitor	

#### **RECORD FOR LIVESTOCK GRAZING**

Name:		
Year:	 Farm No:	Tract No:

Field/ Pasture	Acres	Livestock Species/ Class	Livestock Wt.*	Livestock No.	Key Forage Species	Date Livestock In	Begin Graze Ht.*	Date Livestock Out	End Graze Ht.*	Days Grazed	Days Rest	Precip. Type/ Inches	Remarks/Observation Weed Pressure Wildlife Use etc.

#### **RECORD FOR LIVESTOCK GRAZING**

ame:		
Year:	 Farm No:	Tract No:

Field/ Pasture	Acres	Livestock Species/ Class	Livestock Wt.*	Livestock No.	Key Forage Species	Date Livestock In	Begin Graze Ht.*	Date Livestock Out	End Graze Ht.*	Days Grazed	Days Rest	Precip. Type/ Inches	Remarks/Observation Weed Pressure Wildlife Use etc.

